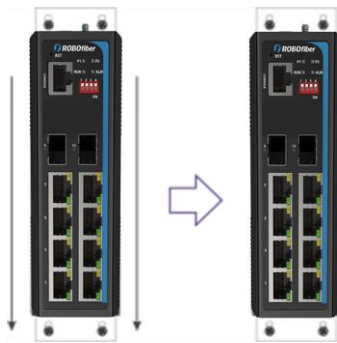


To remove unit from rail, please repeat procedure in reverse. Start by pulling out the bottom of unit from the DIN rail.

Wall mounting procedure

All Industrial switches from HGW series have DIN rail bracket mounted from factory to the rear panel of the unit. If Wall mounting is needed, please first remove the pre-installed DIN rail bracket.

Secure the wall mounting brackets to the switch as in the below diagram. You will need 4x M3 screws for the wall mounting brackets (included) and screws for wall securing that should have head diameter larger than 6mm and screw body less than 3.5mm (these screws are not included in the package)



FCC and CE markings

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

This is a CE class B device, intended to be used in residential, commercial or industrial applications.

Management manual

Please visit www.robofiber.com to download the PDF file management manual for all managed series switches.

Industrial Ethernet

Managed Switches Gigabit Ethernet (PoE included)

**HGW-1604SM, HGW-1604SM-PSE, HGW-1608SM-PSE
HGW-2404SM, HGW-2404SM-PSE, HGW-1612SM**



User's Manual

Rev 1.1 - September 2023

Industrial Ethernet Managed Switches

Ordering Information

HGW-1604SM Gigabit Ethernet Switch 16x 10/100/1000Base-Tx +4x 100/1000Base-X SFP slot ports, DIN rail and Wall mount installation console and web managed

HGW-1604SM-PSE Gigabit Ethernet Switch 16x 10/100/1000Base-Tx +4x 100/1000Base-X SFP slot ports, DIN rail and Wall mount installation console and web managed, **480W available PoE budget**

HGW-1608SM-PSE Gigabit Ethernet Switch 16x 10/100/1000Base-Tx +8x 100/1000Base-X SFP slot ports, DIN rail and Wall mount installation console and web managed, **480W available PoE budget**

HGW-2404SM Gigabit Ethernet Switch 24x 10/100/1000Base-Tx +4x 100/1000Base-X SFP slot ports, DIN rail and Wall mount installation console and web managed

HGW-2404SM-PSE Gigabit Ethernet Switch 24x 10/100/1000Base-Tx +4x 100/1000Base-X SFP slot ports, DIN rail and Wall mount installation console and web managed, **480W available PoE budget**

HGW-1612SM Gigabit Ethernet Switch 16x 10/100/1000Base-Tx + 12x 100/1000Base-X SFP slot ports, DIN rail and Wall mount installation console and web managed

Overview

The Industrial Ethernet models listed above are high performance and reliability Ethernet switches. All Industrial models are hardened for -40 to +75°C operation and have 6KV surge protection on all ports. Largest configuration of the unmanaged models is 8 copper and 2 fiber ports. All PoE models deliver 30W per each UTP port supporting 802.3at PoE+ standard. Reliability is highly ranked with an MTBF exceeding 120,000 hours. All Industrial Ethernet models listed in this manual have passed IEC standards as described in the Technical Specifications table.

Package includes DIN rail mounting bracket, Wall bracket, screw block power connector and one User Manual.

required by the unit to avoid risk of wires overheating and any risk of fire. This is especially important for the PoE PSE equipment. As general rule, please keep power wiring on a different path from data cables and avoid crossing wires. This will reduce the risk of power surges on data ports.

Rear panel view with DIN rail and wall mounting brackets (common rear view, may vary with model)



Models
 HGW-1604SM
 HGW-1604SM-PSE
 HGW-1608SM-PSE
 HGW-2404SM
 HGW-2404SM-PSE
 HGW-1612SM

DIN rail mounting procedure

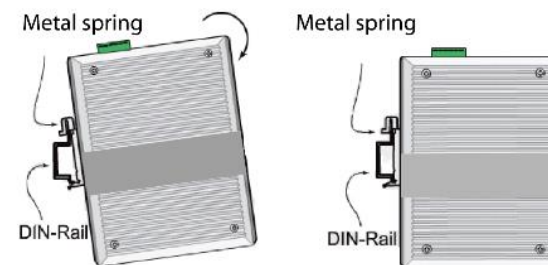
All Industrial switches from HGW series have DIN rail bracket mounted from factory to the rear panel of the unit. If Wall mounting is needed, please first remove the DIN rail bracket. If DIN rail bracket needs to be reattached, please make sure the spring is located on top position when unit is vertical.

Step 1

Please hold unit as in below image, making sure top of bracket with spring falls onto the top edge of TS-35 DIN rail

Step 2

Rotate and snap the unit onto the DIN rail by pushing the bottom onto the TS-35 DIN rail. Unit will be secured to rail.



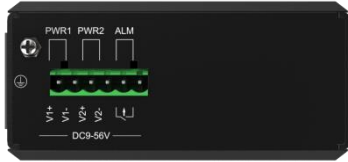
Technical specifications by model

Model	HGW-1604SM	HGW-1604SM-PSE	HGW-1608SM-PSE	HGW-2404SM	HGW-2404SM-PSE	HGW-1612SM
TP ports (RJ45)	16 x 10/100/1000	16 x 10/100/1000	16 x 10/100/1000	24 x 10/100/1000	24 x 10/100/1000	16 x 10/100/1000
SFP slots	4 x 100/1000	4 x 100/1000	8 x 100/1000	4 x 100/1000	4 x 100/1000	12 x 100/1000
LEDs	PWR, Fiber LNK/ACT, UTP GRN/YLW	PWR, Fiber LNK/ACT, UTP GRN/YLW	PWR, Fiber LNK/ACT, UTP GRN/YLW, SYS	PWR, Fiber LNK/ACT, UTP GRN/YLW	PWR, Fiber LNK/ACT, UTP GRN/YLW	PWR, Fiber LNK/ACT, UTP GRN/YLW, SYS
Network Protocols	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD	CSMA/CD
Bandwidth	56G	56G	56G	56G	56G	56G
Packet buffer size	4M	4M	4M	4M	4M	4M
Packet max. size (bytes)	10K	10K	10K	10K	10K	10K
MAC address table size	8K	8K	8K	8K	8K	8K
Safety	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950	CE/LVD EN60950
Power input	DC 9~56V	DC 48~56V	DC 48~56V	DC 9~56V	DC 48~56V	DC 9~56V
Reverse Polarity Protection	yes	yes	yes	yes	yes	yes
PoE budget	none	480W	480W	none	480W	none
Max PoE power per port	n/a	30W	30W	n/a	30W	n/a
Mounting DIN rail bracket	yes	yes	yes	yes	yes	yes
Mounting Wall bracket	yes	yes	yes	yes	yes	yes
Operating Temp (°C)	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75	-40 ~ +75
Storage Temp (°C)	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85	-50 ~ +85
Operating Humidity	10 ~ 90% non-condensing					
Dimensions (mm) *	160x 132x 70	160x 132x 70	160x 132x 70	155x 128x 88	155x 128x 88	155x 128x 88
Weight (g)	1000	1100	1100	1350	1500	1350
MTBF	120,000 hours					
Warranty	3 years	3 years	3 years	3 years	3 years	3 years
Industrial Compliance	FCC Part 15 Subpart B Class A, EN 55022 Class A					
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A					
EMS	EN 61000-4-2 (ESD) Level 3 Criteria B, EN 61000-4-3 (RS) Level 3 Criteria A, EN 61000-4-4 (EFT) Level 3 Criteria A, EN 61000-4-5 (Surge) Level 3 Criteria B, EN 61000-4-6 (CS) Level 3 Criteria A, EN 61000-4-8(PFMF, Magnetic Field) Field Strength 300A/m Criteria A					
Vibration	IEC 60068-2-6					
Freefall	IEC 60068-2-32					
Shock	IEC 60068-2-27					
Rail Traffic	EN 50121-4					
Traffic Control	NEMA-TS2					

* Dimensions are taken with no SFPs inserted, nor power block connectors

Top panel view

(Common top view, may vary with model)



Front DIP Switch

DIP	State	Description
#1	ON	RSTP Disabled
	OFF	RSTP Enable
#2	ON	Port VLAN Enable
	OFF	Port VLAN Disable
#3	ON	SFP Port is 100M
	OFF	SFP Port 100/1000M
#4		Function Reserve

NOTE: 1 When RSTP switches to the ON position, it indicates RSTP is in disabled status.

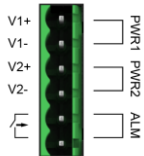
- Models
 HGW-1604SM
 HGW-1604SM-PSE
 HGW-1608SM-PSE
 HGW-2404SM
 HGW-2404SM-PSE
 HGW-1612SM

- When VLAN switches to the ON position, it indicates VLAN is enabled. All LAN ports can only communicate with the SFP uplinks when this option is enabled.
- To enable the changed configuration of DIP Switch function, please reboot the Ethernet switch after tuning the DIP switch.

Top panel has terminal screw block for PWR1 and PWR2 input as well as Alarm Relay output and M3 grounding screw.

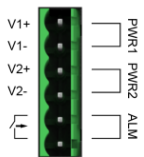
Note: For PSE models 48V input is required.

Alarm Relay wiring



The alarm relay is closed during normal operation. If a Fault is encountered (like power supply input lost) then relay contacts become open until fault is remedied

Power input wiring



There are two independent and redundant power inputs, marked PWR1 and PWR2. Please observe voltage polarity when wiring power to the screw block connector. Please complete wiring without hot wires and with screw block connector disconnected from switch.

Installation warning

Please make sure of proper electrical grounding availability before powering up device. The unit should be grounded using either the M3 grounding screw or making sure the DIN rail installation or wall mount brackets are correctly grounded. Make sure power wires have adequate gauge for the power

Features

- IEEE 802.3 10Base-T, 802.3u 100Base-TX, 802.3z 1000Base-T, 802.3af and 802.3at, 802.3bt support
- Auto-Negotiation and Auto MDI/MDIX
- 6kV Ethernet surge protection on all TP ports
- Full-duplex and Half-duplex flow control modes
- Auto PoE detection for connected PD devices
- 15.4W PoE power for IEEE 802.3af and 30W PoE power for IEEE 802.3at standard, 90W PoE power for IEEE802.3bt for each copper port (PSE models only)
- Store and forward switching mechanism
- Extreme -40 ~ +75 Celsius operating temperature
- DIN rail or Wall mount installation options, IP40 rated housing
- 9-56V DC wide power input (50-56V DC for PoE PSE models)

LED Indicators (markings will vary with models)

	Function
PWR	Off – No power available; On – Power is present
Fiber LK/ACT LINK	Off – No link; On – Fiber link OK; Blinking – data traffic present
UTP GREEN	Off – 10M/100M; On – 1000M on RJ45 port
UTP YELLOW	Off – No link; On – UTP link OK; Blinking – data traffic present
SYS	Off – Switch failed; On – Switch operating normally

Note: Gigabit models require approx. 10 seconds from “Power On” to start operating

Switch front plate view

(Common front view, may vary with model)

- Models
 HGW-1604SM
 HGW-1604SM-PSE

- HGW-2404SM
 HGW-2404SM-PSE

- HGW-1612SM